TITLE: COMPARISON OF .0312% BUPIVACAINE PLUS SUFENTA AND .0625% BUPIVACAINE PLUS SUFENTA FOR EPIDURAL ANESTHESIA DURING LABOR AND DELIVERY

AUTHORS: D. Williams, M.D., W.Kwan,M.D.
B. Chen, M.D., Y. Wu, M.D.
AFFILIATION: Department of Anesthesiology,
Harbor-UCLA Medical Center,
Torrance, CA 90509

INTRODUCTION: Low concentrations of Bupivacaine (B) are commonly combined with narcotic to enhance epidural anesthesia and minimize the motor blockade and hypotension which occurs with higher concentrations of B. We performed a study to compare the efficacy of low concentrations of B and Sufenta (S) for labor epidural analgesia.

METHODS: Institution Review Board and informed consent were obtained. Forty-six healthy term parturients were randomly assigned to one of three groups. Group I (n=16) received .0625% B plus 10ug S, group II (n=15) received .0625% B plus 5ug S, and group III (n=15) received .0312% B plus 10ug S. Epidural catheter was placed at either L2-L3 or L3-L4 interspace, and 10ml of study solution (SS) was given through the catheter. Maternal blood pressure and heart rate, fetal heart rate, onset of pain relief, sensory level, duration of analgesia, motor score, sensory score, course and outcome of labor, and neonatal Apgar scores were recorded. The sensory score was: 0=no relief, 1=partial relief, 2=complete relief but aware of contractions, 3=complete relief and unaware of contractions. The motor score was: 0=no weakness, 1=able to flex knee and foot, 2=only able to flex foot, 3=unable to move lower extremity. Patients with pain scores less than 2 after 15 minutes were given an additional 5ml of SS containing the same concentration of B without S. Data were compared using unpaired Student's t-test and Fisher exact probability test. $P < 0.05$ was considered significant.

RESULTS: There was no difference among the 3 groups with respect to maternal age, height, gravidity, parity, gestational age, course and outcome of labor, neonatal Apgar scores, or incidence of side effects. Other results are shown in the table.

DISCUSSION: We were unable to achieve adequate analgesia in all the patients by using 10ml of .0312% or .0625% B with S as reported by Naulty et al.[1] Increasing the total volume to 15ml improved the analgesic efficacy. Every patient in group I got complete relief when 15ml was given. No patients in the study had significant motor blockade. Therefore, we conclude that for labor epidural analgesia 15ml of .0625% B with 10ug S is a good combination. It provides excellent analgesia with quicker onset and longer duration than the other combinations of B and S in our study.

	I (n=16)	II (n=15)	III (n=15)
Onset (min)	5.4±1.7	7.9±2.9*	10.8±3.9* **
Sensory level (T)	9.6±1.0	10.6±1.1	9.9±1.1
Duration (min)	90.8±14.8	73.8±11.3*	74.6±12.2*
Motor score >0	0	0	0
Sensory score >1 (10ml)	12 (75%)	8 (53%)	3 (20%)*
Sensory score >1 (15ml)	16 (100%)	12 (80%)	4 (27%)* **

p < 0.05 group I vs. group II or group I vs. group III
p < 0.05 group II vs. group III

REFERENCE:
1. Naulty JS et al: Epidural sufentanil-bupivacaine for analgesia during labor and delivery. Anesthesiology 71:A842, 1989.

TITLE: Incidence of Recurrent Herpes Simplex Virus Labialis After Cesarean Section

AUTHORS: J.H. Weiss, DO, M.D. Carney, MD, M.C. Norris, MD , B.L. Leighton, MD and M. Torjman, MEd
AFFILIATION: Department of Anesthesiology, Thomas Jefferson University, Philadelphia, Pennsylvania

INRODUCTION: Recent studies have suggested that epidural morphine after cesarean section increases the risk of recurrence of oral herpes simplex virus lesions (HSV)[1,2]. Because of this risk, some clinicians avoid giving epidural or spinal morphine to many patients with a history of HSV lesions. We designed this prospective study to further evaluate this issue.

METHODS: All parturients undergoing cesarean section from 12/1/89 to present were included in this study. Staff and resident anesthesiologists determined anesthetic technique and drug selection based on patient choice and clinical situation. These choices were made independently of a patient history of HSV lesions. We visited patients postoperatively until discharge, inquiring about the development of oral cold sores. Using X^2 analysis, we compared the incidence of recurrent oral lesions between the two groups.

RESULTS: Two hundred and three patients have participated in this study; 110 white, 84 black, 4 hispanic, 3 oriental and 2 other. Fifty-nine (29.1%) had a previous history of cold sores. A total of 105 patients received epidural (n=24, dose 3-5 mg) or spinal (n=81, dose 0.15-0.25 mg) morphine. Ninety-eight patients (36 epidural, 34 spinal and 28 general) received no spinal or epidural morphine.

Ten patients developed cold sores after surgery. Oral lesions developed in 6 of 105 patients who received spinal or epidural morphine (5.7%) and 4 of 98 patients not receiving spinal or epidural morphine (4.1%) (p=NS). The incidence of cold sores in patients receiving only general anesthesia was 11.1% and in those patients receiving only regional anesthesia was 4.1% (P=NS). One woman who developed a post-operative cold sore received both regional and general anesthesia. Five of 108 patients receiving only spinal anesthesia (4.6%) developed cold sores as did 2 of 59 patients receiving only epidural anesthesia (3.3%) (p=NS).

DISCUSSION: Approximately 40-50% of the general population has a history of cold sores [1,3]. A prospective study conducted in Western Canada reported recurrent HSV lesions in 9% of patients receiving epidural opioids compared to 5% of patients who did not receive epidural opioids. Another study, from Belgium, reported a higher recurrence rate, 35%, in patients who received epidural morphine versus 0% in those who received no epidural morphine. This preliminary study clearly shows no difference in the rate of occurrence of lesions in patients receiving spinal or epidural morphine.

The marked difference in the results of this study compared to previous studies may be explained by differences in patient populations. The patient population in the other two studies may have been more homogeneous than our racially and economically diverse population. Based on our findings, there is no clear evidence to suggest that spinal or epidural morphine are contraindicated for post-cesarean section pain relief in parturients with a history of cold sores.

REFERENCES:
1. Anesth Analg 67:318-323, 1988.
2. Anesth Analg 66:1321-1324, 1987.
3. N Engl J Med 314:686-691, 1986.